

Software Diversification for WebAssembly

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Abstract

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Sammanfattning

LIST OF PAPERS

WebAssembly Diversification for Malware Evasion Javier Cabrera-Arteaga, Tim Toady, Martin Monperrus, Benoit Baudry Computers & Security, Volume 131, 2023, 17 pages https://www.sciencedirect.com/science/article/pii/S01674048230

2. Wasm-mutate: Fast and Effective Binary Diversification for WebAssembly

Javier Cabrera-Arteaga, Nicholas Fitzgerald, Martin Monperrus, Benoit Baudry

Under review, 17 pages

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https://arxiv.org/pdf/2309.07638.pdf

3. Multi-Variant Execution at the Edge

Javier Cabrera-Arteaga, Pierre Laperdrix, Martin Monperrus, Benoit Baudry

Moving Target Defense (MTD 2022), 12 pages

https://dl.acm.org/doi/abs/10.1145/3560828.3564007

4. CROW: Code Diversification for WebAssembly

Javier Cabrera-Arteaga, Orestis Floros, Oscar Vera-Pérez, Benoit Baudry, Martin Monperrus

Measurements, Attacks, and Defenses for the Web (MADWeb 2021), 12 pages https://doi.org/10.14722/madweb.2021.23004

5. Superoptimization of WebAssembly Bytecode

Javier Cabrera-Arteaga, Shrinish Donde, Jian Gu, Orestis Floros, Lucas Satabin, Benoit Baudry, Martin Monperrus

Conference Companion of the 4th International Conference on Art, Science, and Engineering of Programming (Programming 2021), MoreVMs, 4 pages https://doi.org/10.1145/3397537.3397567

6. Scalable Comparison of JavaScript V8 Bytecode Traces
Javier Cabrera-Arteaga, Martin Monperrus, Benoit Baudry
11th ACM SIGPLAN International Workshop on Virtual Machines and
Intermediate Languages (SPLASH 2019), 10 pages

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Contents

List	of Papers	iii
Ackn	nowledgement	v
\mathbf{Cont}	ents	1
I T	hesis	3
1 In	ntroduction	5
1.1	WebAssembly security	. 6
1.2	Software Monoculture	. 7
1.3	WebAssembly malware	. 7
1.4	Problem statements	. 8
1.5	Contributions in Software Diversification	. 8
1.6	Summary of research papers	. 10
2 B	ackground and state of the art	13
2.1	WebAssembly	. 13
2.2	Software diversification	23
3 A	utomatic Software Diversification for WebAssembly	31
3.1	CROW: Code Randomization of WebAssembly	32
3.2	MEWE: Multi-variant Execution for WebAssembly	. 37
3.3	WASM-MUTATE: Fast and Effective Binary for WebAssembly . $\ . \ $	41
3.4	Comparing CROW, MEWE, and WASM-MUTATE	46
4 E	xploiting Software Diversification for WebAssembly	51
4.1	Offensive Diversification: Malware evasion	. 51

2 CONTENTS

4.2	1.2 Defensive Diversification: Speculative Side-channel protection 58					
5 C	onclusions and Future Work	67				
5.1	Summary of technical contributions	67				
5.2	Summary of empirical findings	68				
5.3	Future Work	69				
II In	acluded papers	71				
Super	roptimization of WebAssembly Bytecode	7 5				
CRO	W: Code Diversification for WebAssembly	77				
Multi	-Variant Execution at the Edge	7 9				
WebA	Assembly Diversification for Malware Evasion	81				
Wasm-mutate: Fast and Effective Binary Diversification for WebAssembly						
Scalable Comparison of JavaScript V8 Bytecode Traces						

Part I

Thesis